# National Park Service Comment on Effects of Proposed Cape Wind Energy Project, Nantucket Sound, Massachusetts, on National Historic Landmarks

# **Background**

At the request of the Minerals Management Service (MMS), the National Park Service (NPS) issues this comment on whether the proposed Cape Wind Energy Project (Project) would constitute a "direct and adverse effect" on the Nantucket Historic District and the Kennedy Compound, both National Historic Landmark (NHL) properties. This comment follows the September 4, 2009, meeting of MMS, NPS, and Department officials, and is as a result of the recommendation to the MMS by the Advisory Council on Historic Preservation (ACHP) to seek such comment from the NPS.

MMS's position as summarized in its April 29, 2009, email to NPS is that adverse effects posed by the Project are "indirect visual effects, not direct physical effects" and as a result, the undertaking is not subject to the provisions of Section 110(f) of the National Historic Preservation Act (NHPA). MMS's Finding of Adverse Effect concluded that the Project "constitutes an adverse effect for the 28 above-ground historic properties (see Table 4.1)...in that the undertaking will change the character of the properties' setting that contributes to their historic significance; and the undertaking introduces visual elements that are out of character with the properties." Both the Nantucket Historic District and the Kennedy Compound are included in Table 4.1. Subsequently, MMS stated its position that Section 110(f) of the NHPA is not applicable "in situations involving effects that are only indirect."

It is the understanding of the NPS that the Project Section 106 consulting parties, which include the Massachusetts Historical Commission (SHPO), the Mashpee Wampanoag Tribe (THPO), and the Wampanoag Tribe of Gay Head, Aquinnah (THPO), have concurred that the visual intrusion resulting from the Project will have an adverse effect on both the Nantucket Historic District NHL and the Kennedy Compound NHL. The NPS further understands that MMS and the consulting parties do not necessarily agree as to the degree of adverse effect and whether the adverse effect on these two NHLs is or is not direct.

The NHPA (at 16 USC 470h-2), establishes Federal agency responsibilities for the preservation of historic properties. Where NHLs are concerned, Section 110(f) (16 USC 407h-2(f) provides that:

Prior to the approval of any Federal undertaking which may <u>directly and adversely</u> affect any National Historic Landmark, the head of the responsible agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such

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<sup>&</sup>lt;sup>1</sup> Brandi M. Carrier Jones, ed. *Minerals Management Service Documentation of Section 106 Finding of Adverse Effect, Prepared for Submission to Massachusetts Historical Commission Pursuant to 36 CFR 800.6(a)(3) for the Cape Wind Energy Project.* Lusby, MD: Minerals Management Service, December 29, 2008, 30, 34, and 35. Walter D. Cruickshank, *Proposed Cape Wind Energy Project, Nantucket Sound, Massachusetts.* Washington DC: Minerals Management Service, September 8, 2009, 2.

landmark, and shall afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking. [underlining added]

Moreover, pursuant to Section 101(g) (16 USC 470a(g)), the Secretary of the Interior has promulgated guidelines for these Federal agency responsibilities, *The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act (Secretary's Standards)*, (Federal Register, April 24, 1998, pages 20496-20505). Standard 4 of these Guidelines, (j)–(l) pertain specifically to NHLs, including the process to be followed if an effect is direct and adverse.

The Nantucket Historic District, which includes the island of Nantucket, Massachusetts, in its entirety, was designated as an NHL by the Secretary of the Interior on November 13, 1966. The Kennedy Compound, which fronts the northern side of Nantucket Sound at Hyannis Port, Massachusetts, was designated as an NHL by the Secretary on November 28, 1972.

### **Summary of NPS Comment**

Determinations like this are necessarily made on a case by case basis, on the facts of a particular undertaking, and the NHL at issue. Although this comment considers two NHLs, in reaching its conclusions the NPS considered the effects of the Project on each of the two NHLs. Following a detailed review of NPS file documentation for both NHLs, area nautical charts and topographical maps, the Project *Final Environmental Impact Statement (FEIS)*, MMS's *Section 106 Finding of Effect*, pertinent National Register Bulletins, and other documentation, as well as professionally prepared viewshed assessments and computer-simulated photographs including those used in the following pages, the NPS finds that the Project will have an adverse effect on the historic Nantucket Sound settings of both NHLs. However, NPS further finds that this adverse effect is not "direct."

# **Project Overview**

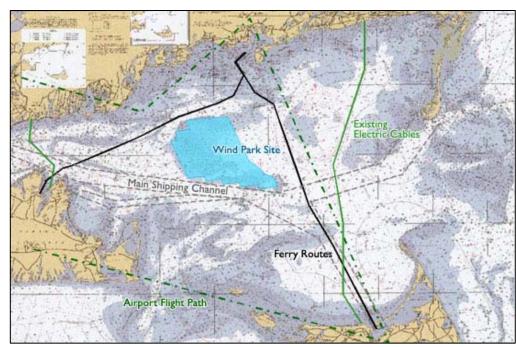
The proposed site of the Project encompasses most of Horseshoe Shoal, which is located in Nantucket Sound approximately 6 miles south/southwest of Hyannis Port and the Kennedy Compound NHL, 9 miles east/northeast of Martha's Vineyard, and 13 miles northwest of Nantucket and the Nantucket Historic District NHL (see following map). Neither Horseshoe Shoal nor Nantucket Sound are within the boundaries of either NHL.

"The proposed project entails the construction, operation, and decommissioning of 130 Wind Turbine Generators (WTGs) located in a grid pattern on and near Horseshoe Shoal in Nantucket Sound, Massachusetts, as well as an Electrical Service Platform (ESP), inner-array cables, and two transmission cables (USDOI MMS 2008; Figure 2.1)." All WTGs will be mounted on tubular, conical steel towers set atop monopile foundations. The maximum tip height reached by any WTG rotor blade will be 440 feet; minimum water clearance for rotor-blade tips will be 75 feet. Individual WTG/tower units will be located between 0.3 and 0.5 miles from each other and placed within an approximately 24-square-mile footprint. All WTGs must

<sup>&</sup>lt;sup>2</sup> Brandi M. Carrier Jones, Section 2.0.

include navigation and aviation warning lights conforming to standards established by the United States Coast Guard (USCG) and the Federal Aviation Administration (FAA).





Nantucket

Map of Nantucket Sound, Massachusetts, showing relationship of proposed Cape Wind Energy Project "Wind Park Site" in relation to Hyannis Port, Nantucket Island, and extant flight paths, shipping channels, ferry routes, and undersea electrical cables. (http://www.capewind.org/article7.htm).

Each of the 130 WTGs will generate electricity independently of each other. Solid dielectric submarine inner-array cables from each WTG will interconnect with the grid and terminate at the ESP; the ESP would serve as the common interconnection point for all WTGs. The proposed submarine transmission cable system is approximately 20.1 kilometers (km; 12.5 miles [mi]) in length extending from the ESP to the landfall location in Yarmouth, MA. Of the 20.1 km, 12.2 km [7.6 mi] are located within the Massachusetts territorial line (approximately 5.6 km [3.5 mi] from shore). The two submarine transmission cables would travel north to northeast through Nantucket Sound and into Lewis Bay, passing by the western side of Egg Island and making landfall at New Hampshire Avenue, in Yarmouth (USDOI MMS 2008).

#### Area of Potential Effect

As stated in the MMS's Finding of Adverse Effect, the Project's Area of Potential Effect is defined as follows:

The Area of Potential Effect (APE) for the onshore component of the proposed project

Martha's Vineyard

<sup>&</sup>lt;sup>3</sup> Ibid.

includes areas where physical ground disturbance would occur during construction, operation and maintenance, and decommissioning (e.g., the areas along the overland route to the Barnstable Switching Station where the transmission cable will tie-in), as well as those areas within view of the site of the proposed project (e.g., historic properties on Cape Cod, Martha's Vineyard, and Nantucket from which open views of the visible components of the proposed project, e.g. WTGs would be possible). The APE for offshore archaeological resources includes the footprints of the WTG structures on the sea floor; the work area around each WTG where marine sediments may be disturbed; the jet plowed trenches for installation of the inner-array cables connecting the WTGs to the ESP; the jet plowed trenches for the transmission cable system from the ESP to the landfall site; and associated marine work areas such as anchor drop areas (USDOI MMS 2008).<sup>4</sup>

### Applicable Laws, Regulations, and Requirements

Pursuant to the provisions of the Historic Sites Act of 1935 and 36 CFR 65.2(b), upon designation by the Secretary of the Interior NHLs are automatically listed in the National Register of Historic Places (NR) and therefore subject to the provisions of Section 106 of NHPA. Section 106 regulations also contain provisions to protect NHLs, *Special Requirements for Protecting National Historic Landmarks*. There are also guidance documents to assist in the compliance with these requirements, providing advice, instructions and examples. Due to Federal permitting requirements, the Project constitutes a Federally-assisted undertaking subject to the administrative oversight of MMS. As a Federal undertaking, the Project is subject to review under Section 106 of NHPA (16 USC 470f), which provides:

The head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or Federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking.

To aid the ACHP, the ACHP may but is not required to request the Secretary of the Interior to report on that undertaking, "detailing the significance of any historic property, describing the effects...and recommending measures to avoid, minimize or mitigate adverse effects." This report is produced by NPS and is referred to as a Section 213 Report because it is authorized by

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<sup>&</sup>lt;sup>4</sup> Brandi M. Carrier Jones, Section 2.1.

<sup>&</sup>lt;sup>5</sup> 36 CFR 800.10, Special requirements for protecting NHLs, reiterates text of Section 110(f) of NHPA which: "requires that the agency official, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to any National Historic Landmark that may be directly and adversely affected by an undertaking. When commenting on such undertakings, the Council shall use the process set forth in §§800.6 through 800.7 and give special consideration to protecting National Historic Landmarks as specified in this section." See also *The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act*, Section 4(1).

NHPA Section 213 (16 USC 470u). The ACHP has specifically not requested a Section 213 Report on the Project, instead asking for this comment.

The Section 110(f) review process is similar to that required under Section 106, but requires Federal agencies to exercise a higher standard of care prior to the approval of any Federal undertaking that may directly and adversely affect NHLs. Agencies are mandated to engage in such planning and action as may be necessary to minimize harm to NHLs, and to obtain ACHP comments on the undertaking. As in the case of the Project, Section 110(f) reviews are generally accomplished under the regulations implementing Section 106, 36 CFR 800. Additional guidance regarding a Federal agency's responsibility for implementing Section 110(f) is provided under the *Secretary Standards*, Standard 4, Guidelines (j), (k), and (l).

The regulations for the implementation of Section 106, at 36 CFR 800, define an "effect" as meaning an "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register," (36 CFR 800.16(i)), and an "adverse effect" in 36 CFR 800.5(a)(1) as:

[W]hen an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

These regulations were promulgated by the ACHP and when ACHP revised them in 2000, it was asked about the definition of "adverse effects," and what was meant by "when an undertaking 'may' alter 'indirectly any' of the characteristics making the property eligible in a way that would diminish the integrity of the property's 'feeling'or 'association.'" The ACHP responded that:

...adverse effect criteria are linked specifically to objective National Register criteria published by the National Park Service. The National Register criteria itself expands on the meaning of its terms and provides various examples. These criteria have been fleshed out through consideration and application countless times, over the years, since the program began, and explained through various guidance documents.<sup>6</sup>

The NPS has described "direct" effects and "indirect" effects within the context of Section 106 reviews in guidance documents, including the 1997 NPS *National Register Bulletin: Defining Boundaries for National Register Properties*, which provides:

To be in compliance with the act [Section 106 of NHPA], Federal agencies must identify and evaluate National Register eligibility of properties within the area of potential effect and evaluate the effect of the undertaking on eligible properties. The area of potential effect is

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<sup>&</sup>lt;sup>6</sup> Federal Register, December 12, 2000, 77707.

defined as the area in which eligible properties may be affected by the undertaking, including direct effects (such as destruction of the property) and indirect effects (such as visual, audible, and atmospheric changes which affect the character and setting of the property). The area of potential effect may include historic properties that are well beyond the limits of the undertaking. For example, a Federal undertaking outside of the defined boundaries of a rural traditional cultural property or an urban historic district can have visual, economic, traffic, and social effects on the setting, feeling, and association of the eligible resources.<sup>7</sup>

The ACHP, when it revised its regulations in 2000, was also asked the role of proximity of an undertaking to an historic site. The ACHP stated:

The standard set forth under section 106 is effect, not proximity. While it is possible that distance separating an undertaking from a particular historic property may remove any effects, such a determination should be made on a case by case basis, and is not suitable for a generalization. Different undertakings simply have different areas of potential effects according to several factors such as the nature of the undertaking itself, the nature of the historic property at issue, and topography. <sup>8</sup>

## **Relationship Between Historic Significance and Integrity**

As the above definition of adverse effects indicates, determination of adverse effect requires an informed understanding of the integrity of a historic resource's character-defining features. The NPS's 1999 *National Register Bulletin: How to Prepare National Historic Landmark Nominations (Bulletin)*, defines integrity as "the ability of an historic property to convey its historical associations or attributes." The *Bulletin* notes that, while the evaluation of integrity is somewhat subjective, "it must be grounded in an understanding of a property's physical features and how they relate to its historical associations or attributes." <sup>10</sup>

The *Bulletin* identifies and describes seven aspects of integrity that are, in various combinations, used to evaluate NHLs: location, design, setting, materials, workmanship, feeling, and association. Unlike other properties listed in the NR, NHLs must possess several, and usually most of these aspects to a "high" degree. The retention of specific aspects of integrity is paramount in conveying a property's significance. Determining which of these aspects are most important to a particular property requires knowing why, where, and when the property is significant.

The Bulletin indentifies the three factors utilized by the NPS in assessing the integrity of NHLs:

• Define the essential physical features that must be present to high degree for a property to represent its significance;

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<sup>&</sup>lt;sup>7</sup> National Register Bulletin: Defining Boundaries for National Register Properties. Washington DC: National Park Service, 1997, 1. See also NPS-28, Cultural Resources, chapter 5, "Assessing Effects," pages 59-61.

<sup>&</sup>lt;sup>8</sup> Advisory Council on Historic Preservation, Protection of Historic Properties, 36 CFR 800, Final rule; revision of current regulations, *Federal Register*, Vol. 65, No. 239, Tuesday, December 12, 2000, 77707.

<sup>&</sup>lt;sup>9</sup> National Register Bulletin: How to Prepare National Historic Landmark Nominations. Washington DC: National Park Service, 1999, 36.

<sup>&</sup>lt;sup>10</sup> *Ibid*.

- Determine whether the essential physical features are apparent enough to convey the property's significance; and
- Compare the property with similar properties in the nationally significant theme. 11

#### **National Historic Landmarks Documentation**

Documentation regarding the location, boundaries, significance, and integrity of the Nantucket Historic District and the Kennedy Compound as well as photographs and maps for each resource, are maintained by the NPS in the files of the NR and NHL Program in Washington, DC. NR and NHL files include original nomination documents as well as all supplementary documentation and communications collected on each resource since its date of listing/designation. NPS routinely utilizes such file documentation for a variety of preservation and educational purposes, including as a core reference source in the Section 106 and Section 110(f) decision-making processes. The following statements of significance for the Nantucket Historic District and the Kennedy Compound are summaries compiled by NPS from documentation currently maintained in the file for each resource.

## **National Significance of the Nantucket Historic District**

The Nantucket Historic District is nationally significant both for its association with the American whaling industry (NHL Criterion 1) and for its remarkable concentration of well-preserved, whaling-industry related architecture (NHL Criterion 4). The island's principal historic village, Nantucket Town, remains one of the finest surviving architectural and environmental examples of an early 19<sup>th</sup>-century seaport town in New England. The Nantucket Historic District includes the entire island of Nantucket (30,000 acres and some 75 miles of coastline).



Typical View of Nantucket Harbor, Nantucket Historic District. Anonymous (http://www.new-england-weekender.com/nantucketisland.html).

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<sup>&</sup>lt;sup>11</sup> *Ibid.*, 37.

Prior to European contact, Algonquian-speaking Native Americans, who subsisted by planting maize, beans, and squash, exploiting the rich aquatic resources in the ponds and along the shoreline, and hunting sea mammals such as seals and whales near the shore, inhabited the island. Archeological evidence indicates that these Algonquians were a part of a larger and culturally linked community that extended from Saco Bay in Maine, to the Housatonic River area in Connecticut, and from Long Island inland to southern New Hampshire and Vermont. Europeans first settled on Nantucket in the mid-17<sup>th</sup> century. Although Europeans originally lived alongside the Native American population, they eventually came to dominate the island.

Between the 1740s and 1840s, Nantucket became the world's leading whaling port and the island became synonymous with the great age of New England whaling. The island's dominance in this industry stemmed from both its geography and innovations developed by the islanders. Crews from Nantucket led the way not only in finding new hunting areas, but also in developing new techniques of whaling. Nantucket crews were also the first to understand the Gulf Stream, which an islander then mapped for the nation's Postmaster General.

During the height of the whaling industry in the early 19<sup>th</sup> century, Nantucket's population numbered almost 10,000. The island also boasted five wharves, 10 rope walks, 36 candle factories, sail lofts, cooper shops, and boatyards and shipyards. The island's harbor shoreline was lined with commercial and industrial buildings associated with the whaling industry and, in adjacent Nantucket Town, wealthy sea captains and merchants built magnificent homes. However, much of the island's early commercial building stock was destroyed in a 19<sup>th</sup>-century fire. Although many of the island's commercial buildings and structures specifically associated with the whaling industry are no longer extant, many significant residences and associated structures remain intact, and the harbor, which was of central importance to the whaling industry, remains an active seaport. These surviving buildings and structures and the continuous use of Nantucket Town's harbor for commercial purposes provide historical continuity and add to the quality of the landmark as a whole.

The well-preserved physical forms, plan, and materials associated with the island's historic villages are a physical manifestation of the island's wealth, which was derived from the island's successful whaling industry. Because the national significance of Nantucket rests on its heritage as a maritime community associated with whaling, the island's building stock, historic villages, and harbor are of central importance to the property's designation as an NHL. In this regard, these key elements of the Nantucket Historic District as a whole retain a degree of integrity sufficiently high enough to effectively convey the essential ambiance of an early 19<sup>th</sup>-century whaling community.

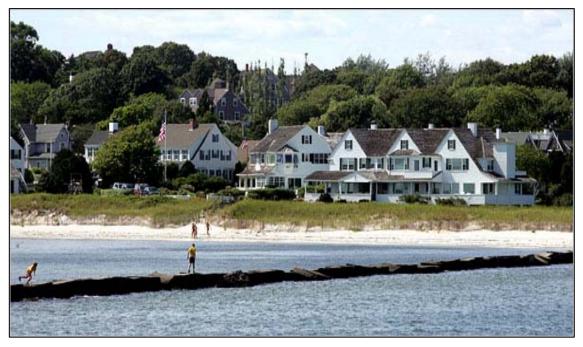
# **National Significance of the Kennedy Compound**

The Kennedy Compound, a six-acre family enclave in Hyannis Port, Massachusetts, is nationally significant for its association with the Kennedy family (NHL Criterion 2). The compound includes homes formerly owned by Ambassador Joseph P. Kennedy, President John F. Kennedy, and U.S. Attorney General and Senator Robert F. Kennedy. After 1982 and up to his death in

2009, U.S. Senator Edward M. Kennedy used the home of Ambassador Joseph P. Kennedy as his residence on Cape Cod.

In 1929, Joseph Kennedy acquired the Hyannis Port house after renting it for three summers. The family's ethnic and religious identity, which became an issue with John F. Kennedy's presidential campaign in 1960, was intrinsically linked to the choice of Hyannis Port as the setting for the family's summer home. At the time Joseph Kennedy purchased the property, Hyannis Port, unlike Cohasset, Massachusetts where Kennedy and his family had spent one summer, was more welcoming to Irish Catholics.

The compound's first and foremost residence, the Joseph P. Kennedy House, is prominently situated fronting Nantucket Sound slightly more that a mile west of Cape Cod's Lewis Bay. While not nationally significant for its architecture, the early 20th-century summer "cottage" was greatly expanded by Joseph Kennedy, and today remains one of the most impressive historic properties in Hyannis Port. As adults, John F. and Robert F. Kennedy, bought the houses adjacent to their father's, significantly expanding the property held by the Kennedy family, and thereby creating a large compound with multiple residences. While the compound served as a private retreat for the family, the political activities of the Kennedy family ensured that the property was in the forefront of the national consciousness during the early 1960s. In 1972, the significance of the compound was formally recognized when the property was designated by the Secretary of the Interior as an NHL.



Right-to-left: The Joseph P. Kennedy and John F. Kennedy House (part of the Kennedy Compound, Hyannis Port, Mass). Robert Spencer for the *New York Times* (http://travel.nytimes.com/2006/08/18/travel/escapes/18down.html).

The significance of the property is embodied in both the buildings and structures that make up the compound as well as the relationships between these buildings and structures, and the association of the whole with the Kennedy family. It was in and around the Joseph P. Kennedy

house that the Kennedy children spent their formative summers engaging in various competitive pursuits, such as football, tennis, swimming, and sailing, all of which were encouraged by their father. John F. Kennedy's 1960 presidential campaign was also planned in and around his father's and his own house. More broadly, the relationship of the various buildings and structures, specifically their close proximity to one another, illustrates and reflects the interrelationships between the family members, both in terms of their familial as well as their political relationships.

The large lawns associated with the property are especially significant for their association with both the Kennedys' well-known and widely publicized practice of playing family football games as well as John F. Kennedy's campaign for the Presidency. In 1960, Kennedy spent two weeks at the compound before embarking on his fall election campaign. During this crucial two-week period, Kennedy frequently met with the press in his front yard; pictures of him on the Hyannis Port lawn were commonly featured in the national media, forming a backdrop to Kennedy's campaign and, ultimately, his presidency. After his election to office, Kennedy found it difficult for security reasons to stay at the compound, but he did fly in to the compound every weekend during the summer of 1961 and numerous U.S. and foreign officials met with him there. The Kennedy children all learned to sail, and members of the family were frequently photographed sailing or swimming around the property. As president, John F. Kennedy also often used his family's yacht to entertain foreign officials.

Overall, the property's national significance relies solely on its strong and continuing association with the various members of the Kennedy family. This significance rests in great measure upon the family's recreational use of the property, the proximity of the houses to one another, and the compound's proximity to the water. The compound's exceptional significance continues to be evident as a result of its continued high integrity.

Particularly key aspects of the high integrity associated with the Kennedy Compound are: location, materials, design, workmanship, feeling, and association. The integrity of the compound's oceanfront setting relies primarily on its ability to reflect the water activities in which the Kennedy family habitually engaged—the compound's immediate viewshed—and secondarily on its ability to afford unobstructed-to-the-horizon, ocean views.

### **Analysis**

The national significance and high level of integrity of the Nantucket Historic District are intimately tied to the ability of the physical form, plan, and materials of its historic villages, buildings, structures, and immediate waterfront setting to convey both a way of life and historic patterns of construction and development. Historically, the district's island setting served to limit the impact of outside factors with respect to the creation and retention of historic fabric and life ways. As with most maritime communities, Nantucket's relationship with the water—particularly its main harbor, inlets, coastline, and the expanses of open water that surround the island—is far more significant historically with respect to transportation and commerce than from a scenic standpoint. However, unobstructed ocean views to the horizon in all directions enhance the district's historic sense of place and contribute to district's overall sense of high integrity of historic setting. For the district as a whole, the most important aspects of integrity

continue to be location, design, materials, workmanship, association, and feeling conveyed through, the forms, plans, and materials of its villages, buildings, structures, and Nantucket Town's harbor waterfront.

The national significance of the Kennedy Compound is principally embodied in the buildings, structures, plantings, and lots that combine to form the compound. Thus, location, materials, design, workmanship, and materials function as the core aspects of integrity. These aspects undergird the compound's ability to clearly convey its integrity of feeling and association with Kennedy family. As with Nantucket, while unobstructed ocean views to the horizon enhance the compound's historic sense of place and contribute to the NHL's overall integrity of setting, it is the preservation of a sizable, immediate ocean waterfront setting that is most critical to the property's overall ability to convey its significance and high integrity of historic feeling and association.

Because the Project is not located within the boundary of either NHL, essentially the only aspect of integrity that comes into play in evaluating the undertaking for adverse effect is integrity of setting, which is defined by the NPS as follows:

Setting is the physical environment of a historic property. It refers to the historic character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its historical relationship to surrounding features and open space. The physical features that constitute the historic setting of a historic property can be either natural or manmade and include such elements as topographic features, vegetation, simple manmade paths or fences, and the relationships between buildings and other features or open spaces. <sup>12</sup>

In the case of the Nantucket Historic District, located approximately 13 miles from the Project footprint, a detailed Project shoreline visibility assessment completed by Environmental Design and Research (EDR) in July 2006, indicated that the WTGs will not be visible at all from more than 60% of the island's total coastline, and barely visible at most from the remainder of the island as a whole (see Figure 2 and Figure 1, Sheet 13 of 14). According to EDR's assessment, the Project will partially interrupt 41 percent of the visible seascape horizon as viewed from Hyannis Port and the Kennedy Compound, located approximately 6 miles from the Project footprint (see Figure 1, Sheet 4 of 14). Thus, while these long-distance interruptions visually "diminish" each NHL's overall integrity of setting, they will not impair the far more significant, essential character-defining aspects and high integrity associated with the immediate coastal waterfront settings of either NHL.

#### **Conclusion**

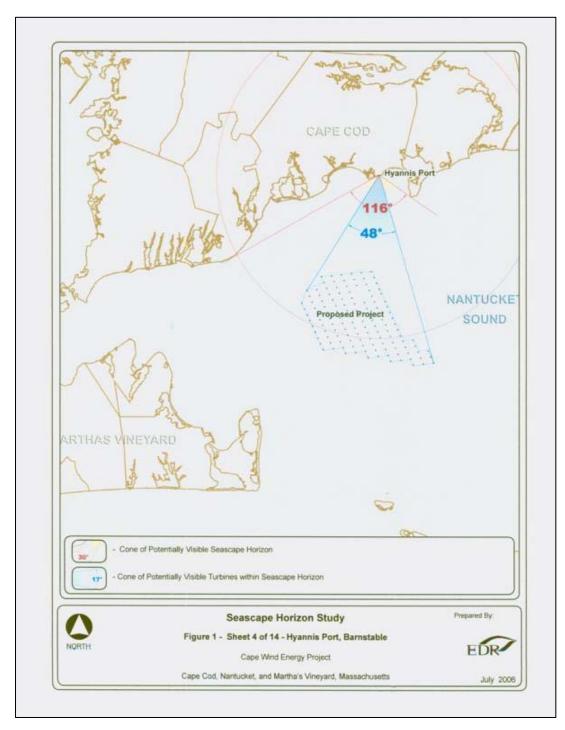
NPS's analysis of the adverse effect of the Project on the Nantucket Historic District and the Kennedy Compound is based on the unique circumstances of each NHL. They both owe part of their significance to their relationship to the water of Nantucket Sound. In this respect, the

<sup>&</sup>lt;sup>12</sup> Bulletin, 36-37.

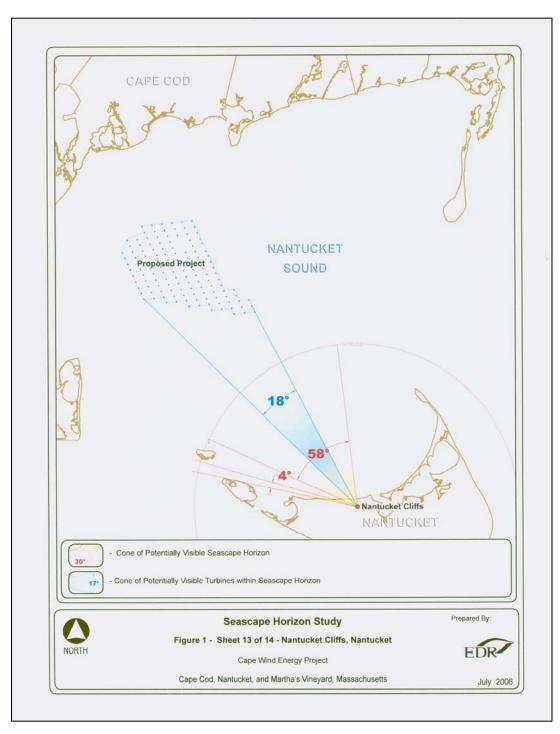
<sup>&</sup>lt;sup>13</sup> Seascape and Shoreline Visibility Assessment Cape Wind Energy Project Cape Cod, Martha's Vineyard and Nantucket Massachusetts. Syracuse, NY: Environmental Design and Research in July 2006, Figure 2.

<sup>&</sup>lt;sup>14</sup> *Ibid.*, Figure 1, Sheet 1. See also *Ibid.*, Figure 1 Sheet 4 of 14.

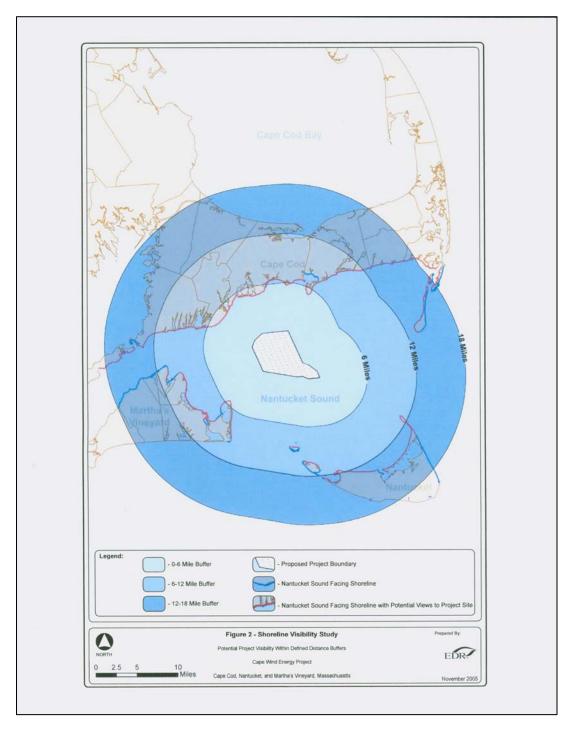
Project will have an adverse effect on both the Nantucket Historic District and the Kennedy Compound. However, the Project will have no direct adverse effect within or even immediately adjacent to the boundaries of either NHL. The adverse effect involved results solely from the visual intrusiveness caused by the introduction of a concentration of modern WTGs within the historic viewsheds of both NHLs. In both cases adverse effect will be limited to the partial obstruction of long-distance, open-to-the-horizon views historically associated with the resources. Given that the adverse effect to each NHL is visual only, limited in overall scope and impact, and does not diminish the core significance of either NHL, NPS concludes that the adverse effect of the undertaking that is the subject of this comment is indirect rather than direct. As these determinations are necessarily made on a case by case basis, the conclusions the NPS reaches here that the visual intrusions are not a direct and adverse effect does not affect the NPS's ability in other circumstances to find that a visual intrusion can cause a direct and adverse effect on an NHL.



Environmental Design and Research, Seascape Horizon Study Figure 1 – Sheet 4 of 14 – Nantucket Cliffs, Nantucket. Seascape and Shoreline Visibility Assessment Cape Wind Energy Project Cape Cod, Martha's Vineyard and Nantucket Massachusetts, July 2006.



Environmental Design and Research, Seascape Horizon Study Figure 1 – Sheet 13 of 14 – Nantucket Cliffs, Nantucket. Seascape and Shoreline Visibility Assessment Cape Wind Energy Project Cape Cod, Martha's Vineyard and Nantucket Massachusetts, July 2006.



Environmental Design and Research, Figure 1 – Shoreline Visibility Study – Nantucket Cliffs, Nantucket. Seascape and Shoreline Visibility Assessment Cape Wind Energy Project Cape Cod, Martha's Vineyard and Nantucket Massachusetts, July 2006.



Computer simulation: Cape WTG park as viewed from Nantucket Cliffs (viewpoint distance from WTG=13.62 miles; camera elevation=44.51 feet; turbine paint color=off white). Environmental Design and Research (http://www.capewind.org/modules.php?op=modload&name=Sections&file=index&req=viewarticle&artid=9&page=1).



Computer simulation: Cape Wind WTG park as viewed from Hyannis Port, slightly west of Kennedy Compound (viewpoint distance from WTG=5.97 miles; camera elevation=22.44 feet; turbine paint color=off white). Environmental Design and Research (http://www.saveoursound.org/site/PageServer?pagename= CapeWind \_Threats\_View).

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